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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SOBUTKA, PHILIP

ART UNIT PAPER NUMBER

2684

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/885,580	Applicant(s) ABUTALEB ET AL.	
	Examiner Philip J. Sobutka	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-17 is/are allowed.
- 6) ☒ Claim(s) 18-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (Satellite Systems For Personal Communications, Proceedings of the IEEE Vol 86, No. 7, July 1998) in view of Rossi et al (US 6,239,767) and in view of Tilford et al (US 5,915,020).

Evans teaches that Imarsat-B can be used to communicate up to 64 Kbps over a 20 Khz channel (Evans see especially page 1326, column 1, paragraph 3). It would have been obvious to one of ordinary skill in the art that the system could also be used to communicate with slower bit rate over wider channels. Therefore it would have been obvious to transmit the claimed 32 Kbps over 25 kHz channels in order to provide for wider channel spacing while eliminating unnecessary speed. As to the satellite terminal having an external modem with diplexer and switches. Rossi teaches an Imarsat compatible terminal using an external modem (Rossi see especially fig 8, item 62), diplexers (Rossi see especially fig 8, item 58) and switches (Rossi see especially fig 8, items 44,66,42). Therefore it would have been obvious to one of ordinary skill in the art to further modify Evans to use the arrangement of Rossi order to utilize an existing Imarsat system. Evans in view of Rossi lack a teaching of the satellite receiver using a Viterbi FEC concatenated with Reed-Solomon error correction. Tilford teaches a satellite receiver in which it is preferred to use a Viterbi FEC concatenated with Reed-Solomon error correction (Tilford see especially col 7, lines 1-10). It would have been obvious to one of ordinary skill in the art to modify Evans in view of Rossi to use the

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Viterbi FEC concatenated with Reed Solomon correction in order to detect and correct error using a preferred means.

2. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (Satellite Systems For Personal Communications, Proceedings of the IEEE Vol 86, No. 7, July 1998) in view of Rossi et al (US 6,239,767) and in view of LaDue (US 2003/0133423).

Evans teaches that Imarsat-B can be used to communicate up to 64 Kbps over a 20 Khz channel (Evans see especially page 1326, column 1, paragraph 3). It would have been obvious to one of ordinary skill in the art that the system could also be used to communicate with slower bit rate over wider channels. Therefore it would have been obvious to transmit the claimed 32 Kbps over 25 kHz channels in order to provide for wider channel spacing while eliminating unnecessary speed. As to the satellite terminal having an external modem with diplexer and switches. Rossi teaches an Imarsat compatible terminal using an external modem (Rossi see especially fig 8, item 62), diplexers (Rossi see especially fig 8, item 58) and switches (Rossi see especially fig 8, items 44,66,42). Therefore it would have been obvious to one of ordinary skill in the art to further modify Evans to use the arrangement of Rossi order to utilize an existing Imarsat system. Evans in view of Rossi lacks a teaching of the satellite receiver using a Turbo FEC. LaDue teaches a satellite receiver in which Turbo coding is used to maximize error correction (LaDue see especially para. 105). It would have been obvious to one of ordinary skill in the art to modify Evans in view of Rossi to use the Turbo FEC as taught by LaDue in order to maximize error correction.

3. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (Satellite Systems For Personal Communications, Proceedings of the IEEE Vol 86, No. 7, July 1998) in view of Rossi et al (US 6,239,767).

Evans teaches that Imarsat-B can be used to communicate up to 64 Kbps over a 20 Khz channel (Evans see especially page 1326, column 1, paragraph 3). It would have been obvious to one of ordinary skill in the art that the system could also be used to communicate with slower bit rate over wider channels. Therefore it would have been obvious to transmit the claimed 32 Kbps over 25 kHz channels in order to provide for wider channel spacing while eliminating unnecessary speed. As to the satellite terminal having an external modem with diplexer and switches. Rossi teaches an Imarsat compatible terminal using an external modem (Rossi see especially fig 8, item 62), diplexers (Rossi see especially fig 8, item 58) and switches (Rossi see especially fig 8, items 44,66,42). Therefore it would have been obvious to one of ordinary skill in the art to further modify Evans to use the arrangement of Rossi order to utilize an existing Imarsat system. Evans in view of Rossi lacks a teaching of the satellite receiver using a Saturn B models. Official Notice it taken that Saturn B is a well-known variety of Inmarsat terminal. Therefore it would have been obvious to one of ordinary skill in the art to use Saturn B in order to utilize readily available components.

4. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (Satellite Systems For Personal Communications, Proceedings of the IEEE Vol 86, No. 7, July 1998) in view of Rossi et al (US 6,239,767).

Evans teaches that Imarsat-B can be used to communicate up to 64 Kbps over a 20 Khz channel (Evans see especially page 1326, column 1, paragraph 3). It would have been obvious to one of ordinary skill in the art that the system could also be used to communicate with slower bit rate over wider channels. Therefore it would have been obvious to transmit the claimed 32 Kbps over 25 kHz channels in order to provide for wider channel spacing while eliminating unnecessary speed. As to the satellite terminal having an external modem with diplexer and switches. Rossi teaches an Imarsat compatible terminal using an external modem (Rossi see especially fig 8, item 62), diplexers (Rossi see especially fig 8, item 58) and switches (Rossi see especially fig 8, items 44,66,42). Therefore it would have been obvious to one of ordinary skill in the art to further modify Evans to use the arrangement of Rossi order to utilize an existing Imarsat system. Evans in view of Rossi lacks a teaching of the satellite receiver using an EFData 300L modems. Official Notice it taken that EFData 300L modems are S a well-known variety of modem. Therefore it would have been obvious to one of ordinary skill in the art to use EFData 300I modems in order to utilize readily available components

5. Claims 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (Satellite Systems For Personal Communications, Proceedings of the IEEE Vol 86, No. 7, July 1998) in view of Rossi et al (US 6,239,767).

Consider claims 19,21. Evans teaches that Imarsat-B can be used to communicate up to 64 Kbps over a 20 Khz channel (Evans see especially page 1326, column 1, paragraph 3). It would have been obvious to one of ordinary skill in the art

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that the system could also be used to communicate with slower bit rate over wider channels. Therefore it would have been obvious to transmit the claimed 32 Kbps over 25 kHz channels in order to provide for wider channel spacing while eliminating unnecessary speed. As to the satellite terminal having an external modem with diplexer and switches. Rossi teaches an Imarsat compatible terminal using an external modem (Rossi see especially fig 8, item 62), diplexers (Rossi see especially fig 8, item 58) and switches (Rossi see especially fig 8, items 44,66,42). Therefore it would have been obvious to one of ordinary skill in the art to further modify Evans to use the arrangement of Rossi order to utilize an existing Imarsat system.

As to claim 18 note that the arrangement of Evans in view of Rossi as modified above would allow for use with leased and standard service.

As to claim 20, note that Evans in view of Rossi would have a "standalone management and control system.

As to claim 24, Evans in view of Rossi lack a teaching of multiple stations sharing leased bandwidth. Official Notice is taken that it is well known in the art to have multiple stations share leased bandwidth. Therefore it would have been obvious to one or ordinary skill in the art to modify Evans in view of Rossi as shown in the claim in order to minimize average cost.

As to claim 22, note that Evans in view of Rossi lack a teaching of using a high power amplifier. Official Notice is taken that the use of high power amplifiers is well known in the art; therefore it would have been obvious to one of ordinary skill in the art to modify Evans in view of Rossi in order to ensure that signals were of sufficient power.

As to claim 23, note that Evans in view of Rossi also lack a teaching of asymmetric transmit and receive rates. Official Notice is taken that it is well known in the art to use asymmetric rates. It would have been obvious to one of ordinary skill in the art to modify Evans in view of Rossi to use asymmetric rates in order to only provide the minimum data rate needed for the communication link.

Allowable Subject Matter

6. Claims 2-17 are allowed.

Consider claim 2. The nearest prior art as shown in Evans and Rossi fails to teach Inmarsat mobile earth control unit and an external satellite modem with an L band interface along with a diplexing means and switches controlled by embedded computer using a single standard Inmarsat-B RF terminal on a mutually exclusive basis, whereby the transmit source feeding the RF terminal is switched between the MCU and the satellite modem by the computer's setting of the switches and the MCU and satellite modem can receive from the RF terminal regardless of which transmit source is connected to the RF terminal

Consider claim 8. The nearest prior art as shown in Evans and Rossi fails to teach a diplexer/switch based means for using an external satellite modem with a standard Inmarsat-B mobile earth station to provide transmission and reception at approximately 32 kbps of throughput per 25 kHz of bandwidth, further comprising a second identical diplexer/switch based means, a means for coupling the second diplexer/switch based means with the first diplexer/switch based means, a means for determining which diplexer/switch based means of the coupled pair has better received

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signal quality at any given time, and a means for permitting only the diplexer/switch-based means with better signal quality to transmit at such time.

Consider claim 10. The nearest prior art as shown in Evans and Rossi fails to teach Inmarsat mobile earth control unit having a first satellite modem, and a second satellite modem with an L band interface along with a diplexing means and switches controlled by embedded computer using a single standard Inmarsat-B RF terminal for switching between a first bypass path that passes signals from DC power to L band with negligible attenuation and a second RF, ICE path wherein the receive path is amplified and filtered when the first path is selected by the computer and wherein a directional coupler inserted in the RF path to provides a filtered amplified connection to the receive interface of the second satellite modem wherein Dc power and an M&C frequency pass through a first low pass filter, thereby providing a DC power path and an M&C path through the switching assembly when the second RF path is selected; and wherein the computer configures the second satellite modem to transmit and receive at data rates higher and lower than the data rate supported by the first satellite modem, sets the power level required by the data rate, and sets the switches to insert the ICE path so that the second satellite modem transmits and receives over the RF terminal.

Response to Arguments

7. Applicant's arguments filed 6-17-2004 have been fully considered but they are not persuasive.

8. Note that claims 3-6 multiply dependent from claim 1, were indicated as allowed in error in the previous action. Only claims 3-6 in the chain depending from allowed claim 2 were intended to be allowed.
9. New claims 18-24 were inadvertently omitted from the action.
10. Since these claims are newly rejected in this action, this action is not being made final.

Conclusion

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J. Sobutka whose telephone number is 703-305-4825. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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NAY MAUNG
SUPERVISORY PATENT EXAMINER

November 1, 2004